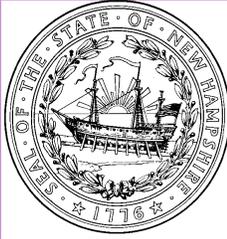


Department of  
Health and Human Services  
Division of  
Public Health Services



Commissioner  
Nicholas Toumpas



Inside this issue:

Director's Corner	3
Bad Bugs Found all Around	4
LIMS is Coming!	5
The Emerging Leaders Program	6
Employee Spotlight	7
The NH Laboratory Response Network	8
Laboratory Updates	9
NH PHL Sudoku	11
Contact Us!	11



# Extracts from the Lab

A New Hampshire Public Health Laboratories Publication

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## The New Hampshire Veterinary Diagnostic Laboratory A Vital Link for Public Health

Robert Gibson, BS, MPH, Microbiology Lab Supervisor, NHVDL



Since its establishment by the New Hampshire legislature in 1969, the New Hampshire Veterinary Diagnostic Laboratory (NHVDL) has been an integral component in safeguarding public health throughout New Hampshire and its neighboring states.

It was created to assist the New Hampshire Commissioner of Agriculture and the State Veterinarian in their efforts to monitor and control important animal diseases and to contribute to the academic, research, and outreach missions of the University of New Hampshire (UNH). This collaboration has continued to this day where the lab operates within the College of Life Sciences on the UNH campus in Durham, New Hampshire.



*Dr. French, a pathologist and NHVDL director, discusses post mortem findings with his students.*

life disease, and companion animal health are just a few examples where veterinary medicine influences public health. Since most of the newly emerging infectious diseases are zoonotic (transmitted between animals and humans) it is not surprising that collaborations in animal and human health continue to increase. The very

inclusion of this article here reflects the awareness of the animal-human health connection.

Most states have at least one veterinary diagnostic lab and it is not uncommon for larger states

to have more than one or to operate in conjunction with their state's department of agriculture. There are a variety of private diagnostic labs that operate on a national scale as well, but the advantage of local diagnostic labs is their ability to quickly recognize issues that might be emerging regionally. A smaller sized lab also allows for more personal attention and familiarity with

*(Continued on page 2)*

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the local veterinary professionals who are on the frontlines of disease recognition.

In addition to the obvious zoonotic relationship with many vectorborne diseases (eastern equine encephalitis [EEE], West Nile virus [WNV], and Lyme) and foodborne illnesses (*Salmonella*, *Campylobacter*, *E. coli* O157, *Listeria*, *Yersinia*, and *Vibrio*), most of the bioterrorism threats recognized by the Centers for Disease Control and Prevention (CDC) and the United States Department of Agriculture (USDA) are also associated with animals. The NHVDL is a participating member of the New Hampshire Laboratory Response Network (NH LRN) as a sentinel lab for the early detection of bioterrorism agents. Some of the top ranked threats, such as anthrax, tularemia, plague, and brucellosis, are all classic animal diseases.

The lab employees are board certified veterinary pathologists, laboratory technicians, operating staff, and numerous UNH students, and consists of four main laboratory units: histopathology, serology, microbiology, and necropsy. Much of the laboratory services mirror what would be seen in a human clinical lab setting; however, there are distinct differences. In human labs there is one type of patient; in veterinary diagnostics the patient clientele is extremely diverse, each with its own unique diseases, flora, and pathology. Not only does the NHVDL see specimens from the more common companion animals, but also from agricultural animals, pet birds, reptiles, rodents, wildlife, exotics, marine mammals, fish, and zoo animals. Imagine how different a skin biopsy may look from a lizard, fish, or bird!



In addition to the diagnosis of sick animals, another major component of the diagnostic lab is disease surveillance. There are State and federal regulations that require the surveillance of various diseases and

restrict the interstate transport of animals without the appropriate disease-free status. For example, horses are required to be free of the virus that causes equine infectious anemia in order to participate in agricultural fairs or to be taken across state lines. This serological antibody test, commonly referred to as the Coggins test, is performed at the NHVDL and each year over 14,000 horses are tested.



*Dr. Wendell Davis, extracting brain tissue from an elk.*

The NHVDL and the NH PHL partner in a variety of ways. Both labs are connected to many of the same reportable diseases such as salmonellosis, campylobacteriosis, and listeriosis. When a sample from larger animals is required for rabies, EEE, or WNV testing, the brain tissue is first removed at the NHVDL facility for subsequent testing at the NH PHL. The NHVDL also monitors antibiotic resistance as multi-drug resistant organisms (MDROs) are becoming more common in veterinary medicine. The NHVDL microbiology lab has isolated methicillin-resistant *Staphylococcus aureus* (MRSA) in cats, dogs, horses, pet birds, and even a porcupine. Anecdotal evidence suggests that many MRSA cases in pets are humanotic in nature, where the owner infects their pet. In addition to being a member of the NH LRN, NHVDL staff members serve on a variety of Health and Human Services committees relating to zoonotic diseases and public health. 

*For questions regarding the NHVDL, please contact Robert Gibson, NHVDL Microbiology Lab Supervisor at [Robert.Gibson@unh.edu](mailto:Robert.Gibson@unh.edu).*

## The Director's Corner

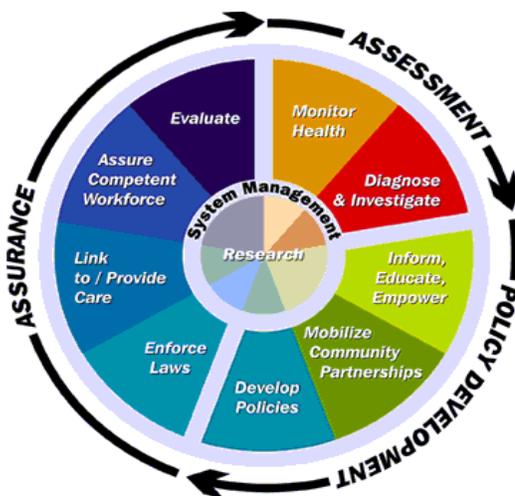
Dr. Christine L. Bean, PhD, MBA, MT(ASCP), Director, NH PHL



Starting with this issue, our laboratory director, Dr. Christine L. Bean, PhD, MBA, MT(ASCP), will review each of the Ten Essential Services of Public Health and describe how the NH PHL aligns itself with them. The Essential Services are a collaborative effort of the Centers of Disease Control and Prevention (CDC) and several other public health organizations to provide a working definition of public health and a guiding framework for the responsibilities of local and state public health systems. The State Public Health Laboratory System (SPHLS) has ventured its own activities related to these Ten Essential Services, and over the months to come, you will learn what role the NH PHL has within each one.

### The Ten Essential Public Health Services

- **Monitor** health status to identify community health problems
- **Diagnose** and investigate health problems and health hazards in the community
- **Inform, educate, and empower** people about health issues
- **Mobilize** community partnerships to identify and solve health problems
- **Develop policies and plans** that support individual and community health efforts
- **Enforce** laws and regulations that protect health and ensure safety
- **Link** people to needed personal health services and assure the provision of healthcare when otherwise unavailable
- **Assure** a competent public health and personal care workforce
- **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services
- **Research** for new insights and innovative solutions to health problems



Developed in 1994 by the Core Public Health Functions Steering Committee, the essential services provide guidelines for public health and are a framework for local public health system responsibilities.<sup>1</sup> The Ten Essential Public Health Services are divided among the three core public health functions: assessment, policy development, and assurance.

### 1. **Monitor** Health Status to Identify Community Health Problems

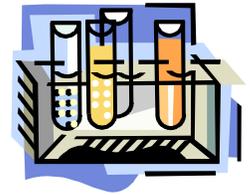
The Association of Public Health Laboratories describes this first Essential Service as:

"Partners in the State Public Health Laboratory System (SPHLS) are intricately involved in the monitoring of health status of communities and contribute to the identification of community health problems. Partners in the System participate in processes to support health surveillance programs by generating accurate and timely laboratory data in all areas of public health (i.e., communicable, metabolic, and chronic diseases and environmental exposures). Appropriate laboratory data is communicated rapidly and efficiently to all appropriate partners".<sup>2</sup>

(Continued on page 4)

(Continued from page 3)

One example of how the NH PHL fulfills this Essential Service is by conducting radiological surveillance on the nuclear power plants that reside in our community. The NH PHL and its partners in the SPHLS monitor the health status of the surrounding communities as well as conduct surveillance for leaks or exposure to potentially dangerous substances released from the plants. The Seabrook Nuclear Power Station (SNPS) and the Vermont Yankee Power Plant (VY) operate in and/or near New Hampshire.



This year, the radiological chemistry laboratory played a significant role in monitoring the river water and additional wells for tritium after it was found that the VY Plant had a tritium leak on-site. The detection of tritium by Vermont Yankee on November 17, 2009, in one of the on-site groundwater wells was traced to an underground pipe tunnel. Accordingly, NH PHL started to independently monitor, test and report on this investigation, and analyze possible risks and remediation actions.

Radiological surveillance ensures that community health problems related to radiation would be identified in a timely manner. In this way, historical data on background levels are collected and analyzed and can be used in the event of a real radiological event such as the 2011 Japan Nuclear Event.

*This is just one example of how the NH PHL identifies community health problems and fulfills the first essential service. Stay tuned for the next newsletter where Dr. Bean will describe how the NH PHL achieves Essential Service 2: Diagnose and investigate health problems and health hazards in the community.*



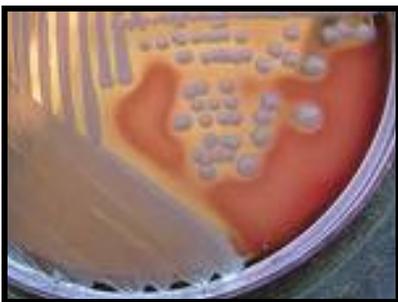
#### References:

1. 10 Essential Public Health Services [Internet]. Centers for Disease Control and Prevention [cited 2011 Mar 21]. Available from: <http://www.cdc.gov/nphsp/essentialServices.html>
2. Online Resource Center [Internet]. Association of Public Health Laboratories [cited 2011 Jan 5]. Available from: <http://www.aphl.org/aphlprograms/lss/projects/phforc/Lists/Essential%20Services/AllItems.aspx>

## Bad Bugs Found All Around

Rebecca Adams, Microbiologist, Clinical Microbiology Unit, NH PHL

*Staphylococcus aureus* is a gram-positive coccus, that is commonly found on skin as normal flora. Methicillin-resistant *Staphylococcus aureus* (MRSA) is a strain of *Staphylococcus aureus* that is resistant to beta-lactam antibiotics.



MRSA is often seen in healthcare settings and can cause severe to life threatening infections. Symptoms vary depending on the site of infection, but patients with open wounds, inva-

sive devices, or weakened immune systems are more prone to bloodstream or surgical site infections, as well as pneumonia. Typically, MRSA is spread by contaminated equipment or personnel, which can readily trigger an outbreak situation.

MRSA has been more recently found in the community, particularly among athletes and in locker rooms. This is primarily due to the sharing of space and personal belongings such as towels and razors. Typically, community acquired MRSA infections are seen on areas of the skin that are covered with hair or have undergone trauma.

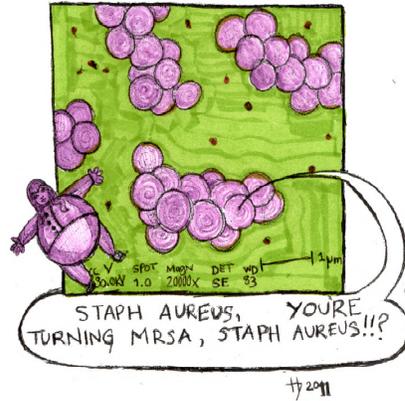
The NH PHL Clinical Microbiology Unit is conducting a study regarding healthcare-associated infections (HAI) caused by MRSA. The data collected will be useful from an epidemiological standpoint, providing information about which strains are circulating in New Hampshire hospitals. The NH PHL Molecular Diagnostics Unit is currently performing pulsed-field gel electrophoresis (PFGE) on MRSA isolates submitted by participating hospital labs.

PFGE is a process that uses restriction enzymes to digest or cut the bacterial isolate genome at specific,

(Continued on page 5)

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known sequences or DNA fragments. The DNA fragments are then separated inside an agarose gel using electrical currents flowing from multiple directions. DNA is negatively charged and therefore the segments will flow through the gel toward the positive electrodes, with smaller fragments of DNA moving faster due to their size. The gel is stained with ethidium bromide and the DNA fragments are then visualized with ultraviolet light. The DNA fragments create a banding pattern, which is called the DNA fingerprint of the bacterial isolate. The fingerprint can be compared with other known banding patterns to determine the bacterial strain. This is important and useful information as the NH PHL can determine if ill patients at the same hospital were all infected with the same strain of MRSA or if multiple strains were involved. PFGE plays a large role in surveillance and outbreak detection. This information can be used to not only link cases at a facility, but also trace back the infection to a source or to discover new strains.



*Our contributing artist, Hannah Doyle, Central Services, NH PHL, references the movie Charlie and the Chocolate Factory: S. aureus can gain methicillin-resistance through a couple of routes, thus becoming MRSA.*

The NH PHL Clinical Microbiology Unit is still looking for hospitals or providers to participate in the HAI study. Those interested in sending MRSA and/or *C. difficile* specimens should contact Wendy Lamothe, Clinical Microbiology Unit Supervisor, at (603) 271-4663 or by email at wendy.d.lamothe@dhhs.state.nh.us. 

## LIMS is Coming!

Jennifer Stearns, Microbiologist, Virology and Special Testing Unit, NH PHL

The NH PHL is excited to announce that they are in the process of configuring their brand new Laboratory Information Management System (LIMS). This is exciting news because the LIMS will enable laboratory staff to do their jobs more efficiently and will provide faster reporting and data sharing. The NH PHL has purchased Horizon Lab Software from ChemWare Inc. Many everyday manual tasks will now be automated using the built-in features of the LIMS. Some of the automation features include: reflexing to confirmation tests as results indicate; faxing, printing and electronic delivery of reports; and downloading of results from lab instrumentation.



In addition, the system has a multitude of tools available for creating custom reports and for ease of data access. With Horizon, the NH PHL will be able to gather data about samples and results quickly and easily. This

will be very useful when applying for grants, gathering information for grant updates, and sharing data

with our partners such as the New Hampshire Bureau of Disease Control and the CDC. Finally, the new system will make great strides with electronic data handling. We will be able to receive electronic test requests, provide electronic results reporting, and share data electronically with our partners. A secure web portal will be set up where laboratory clients can log in, request tests, obtain sample status, and view results.

### What this means to you:

The NH PHL is looking to "go live" with the new system in June 2011 and will slowly bring clients onto the web portal. Lab staff will be setting up trainings for clinicians so they can learn how to utilize the new electronic website. Until then, keep sending in your samples and requisitions as you currently do. Your facility will be notified when it's time to make the changes.

If you have any questions, please contact Jennifer Stearns, LIMS Coordinator, at (603) 271-1778, or jennifer.s.stearns@dhhs.state.nh.us. 

## The Emerging Leaders Program

Denise Bolton, Emergency Preparedness and Arbovirus Unit Supervisor, NH PHL

The Association of Public Health Laboratories (APHL) is a national nonprofit organization representing governmental laboratories that monitor and detect public health threats, ranging from lead contamination in drinking water, to metabolic and genetic conditions in newborns, to emerging infectious diseases in humans.

As the primary advocate for public health laboratories, the APHL is active on many fronts: emergency response, laboratory science, education and training, workforce development, health policy, global laboratory capacity, and laboratory systems.

After an APHL survey revealed an alarmingly small pool of future laboratory directors, the association established the National Center for Public Health Laboratory Leadership (NCPHLL) Emerging Leaders Program (ELP). The ELP is a twelve-month leadership development program that targets current managers who are involved in important decision-making within public health laboratories to advance the following objectives/goals:

- Develop leadership capability within the existing PHL workforce
- Foster collegial relationships among scientific professionals for future leadership roles
- Apply marketing strategies for attracting qualified scientists and management personnel into PHL science



*Denise Bolton, left, cohort II, and Wendy Lamothe, right, cohort I.*

Now in its third year, the ELP cohort classes have made significant headway and are eager to share their success. Two NH PHL employees have participated in the ELP: Wendy Lamothe is a member of the inaugural group (Cohort I) and Denise Bolton is a member of Cohort II.

Cohort I tackled the issue of workforce, specifically public health laboratory supervisors, managers, and lab directors. They created two courses to help educate people about public health and let them know the necessary education and training for a leadership career in public health. Somewhat similar to Cohort I, the members of Cohort II decided to focus on the critical issue of a limited and waning workforce. The current shortage of skilled public health laboratory leaders is not a sudden phenomenon. In many cases public health laboratories are losing their most skilled personnel before they have a chance to recruit and train replacements. State budget deficits, limited graduate programs in public health microbiology, shortage of training opportunities, and the constraints of salary systems contribute to recruitment and retention challenges.



Cohort II collaborated with “Labs are Vital” to develop website content targeted to young adults ages 16-19. The group posted information on public health salaries, degree programs, job descriptions, and links to public health related organizations. The cohort also gathered field stories from lab staff to offer an inside look into the daily life of a laboratorian and convey the importance of their work. Multiple stories have been posted at <http://www.labsciencecareers.com> along with videos and interactive features. The project is now in its last phase: marketing the website to youth. Plans are underway to promote the website through state agencies and local educational institutes to promote public health laboratory careers. A “Discover A Career in Public Health Laboratories” poster has been developed and is being distributed to educational institutions in the states represented by Cohort II.

“We’re trying to communicate the excitement, passion, and enthusiasm people have for public health laboratory work. When you think about the great public health challenges of the day—things like avian influenza and extremely drug resistant tuberculosis (XDR-TB)—you realize that public health laboratory

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scientists really do make a difference every day," says Pandora Ray, director of NCPHLL. It is through these efforts that public health laboratory science can be promoted and celebrated as not only a career choice, but as an integral part of the nation's health system.

Go to <http://www.labsciencecareers.com> to learn more about exciting careers in laboratory science and visit <http://www.labsarevital.com> to read how the contributions of lab professionals are celebrated!

If you are interested in obtaining a poster to display at your school or would like further information about public health laboratory science careers please contact Denise Bolton at the NH PHL at [dbolton@dhhs.state.nh.us](mailto:dbolton@dhhs.state.nh.us). 

Reference:

1. Paving the Way to Public Health Careers, Lab Matters Magazine: Winter 2011, Issue 1, Association of Public Health Laboratories, February 2011.

## Employee Spotlight: Dan Tullo

Susanne Desrosiers, Virology and Special Testing Unit, NH PHL

Dan Tullo is the Microbiology Program Manager at the NH PHL, managing the clinical microbiology, mycobacteriology, and food safety units as well as the emergency preparedness program. He is also overseeing the implementation of our new LIMS. Dan is the "go-to" person for laboratory facility issues and upgrades; troubleshooting important systems such as heating, ventilation, and air conditioning (HVAC); security card readers; autoclaves; and elevators.

Dan hails from Brooklyn, NY, and he obtained a bachelor's degree in medical laboratory science at Hunter College in Manhattan. He then earned a master's degree in microbiology at Oregon State University, working in a drinking water lab during his studies and at a wastewater laboratory after graduating. His first job in public health was at the small Twin Falls branch of the Idaho Bureau of Laboratories. There he managed testing of sexually transmitted disease and family planning specimens, and environmental specimens such as milk and water. He moved to Seattle, Washington, to gain clinical experience in microbiology at Swedish Hospital. Later he decided he wanted a real change of scenery and through the Hospital Corporation of America, he accepted a hospital lab position in Riyadh, Saudi Arabia. Starting as a microbiology technician, he advanced to supervisor during his twelve years there. In 2002, during a turbulent political time in that country, he moved back to the United States and came to work for the NH PHL. In his free time, Dan enjoys outdoor activities such as gardening, hiking, fishing, and canoeing.



Interviewer:

*Why did you choose to work in public health and how have you brought your talents to the NH PHL?*

Dan Tullo:

*Having had some work experience both in public health and private health care settings, I decided in 2002 that public health offered some advantages for me at that time in my life. I was able to bring the microbiology and management skills and knowledge I had gained in Oregon, Idaho, Washington State, and Saudi Arabia and apply them directly to similar situations and programs in New Hampshire. Through my work, I feel as though I am making a real contribution to the health of the people in New Hampshire, but without the stress and shift coverage required in a clinical environment. Some challenges are dealing with bureaucracy and funding issues, but I have found that these issues are similar in both private and public positions.* 

## The New Hampshire Laboratory Response Network

### *A Recurring Article:*

### *How has the NH PHL helped your hospital prepare to respond to an emergency?*

Andrea Harper, MS, MT(ASCP), Infection Control, Spear Memorial Hospital

*The NH PHL newsletter will begin featuring a series of articles starring you, our LRN partners! We would like our readers to hear about your experiences with NH PHL and the LRN in helping you prepare your facility for an emergency. Andrea Harper, MS, MT (ASCP), Infection Control from Spear Memorial Hospital in Plymouth, NH, has graciously submitted the very first article!*

For many years the NH PHL has been used by many small rural hospitals as a send-out laboratory for routine testing such as for lead, chlamydia, gonorrhea, and pertussis. Today the NH PHL is accessed by many for the wealth of knowledge and expertise that it has to offer. Public health laboratory scientists are highly educated specialists with knowledge in one or more disciplines, advanced skills in laboratory practices, and the ability to apply this expertise to address the myriad of complex problems affecting human health.



*The Laboratory  
Response Network:  
Partners in Preparedness*

Since the inception of the NH LRN, microbiologists around the State have been given the opportunity to receive education and training to assist them in preparing and responding to biological and chemical terrorism and other public health emergencies. The NH PHL hosts quarterly LRN meetings where microbiologists from each of the 26 hospital labs and other related institutions gather to receive the most up-to-date information regarding practices and recommendations from the CDC and the Clinical Laboratory Standards Institute (CLSI). They are also given the opportunity to network, ask questions, and discuss concerns related to their laboratories.

The NH PHL offers a wide variety of diagnostic tests and many education opportunities to assist in preparing sentinel laboratories for emergencies. Sentinel labs represent the thousands of hospital-based labs that are on the front lines. Sentinel labs have direct contact with patients and patient specimens. In an unannounced or covert terrorist attack, patients provide specimens during routine patient care.

Sentinel labs would then be the first facilities to detect a suspicious specimen. A sentinel laboratory's responsibility is to refer suspicious samples to the reference lab, which is the NH PHL.

The NH PHL offers training development in the form of webinars from the APHL, courses in molecular diagnostic testing, wet labs to instruct hospital surveillance laboratories on how to identify suspect agents of bioterrorism, and instructional courses on how to package and ship specimens properly. As many of you know, a small NH hospital had the opportunity to use these skills to identify anthrax from a patient in December 2009. Although a non-terrorist threat, it was still equally important to rule out the routine bacillus contaminant from *Bacillus anthracis*, notify the appropriate authorities, and ship the samples properly. The courses that the NH PHL offers train microbiologists to do this correctly and safely.



*NH LRN members at our March 23, 2011 meeting learning about how our new LIMS will benefit them when submitting specimens and obtaining results. The NH LRN consists of members from hospital and clinical labs across the state as well as the Army National Guard's 12th Civil Support Team.*

Remember, the NH PHL is only a phone call away. They have always been friendly and available to answer any of my questions. Since I work at a small rural hospital we do not always have the resources readily available and a quick phone call to the NH PHL often will resolve any issues or answer my questions. 

*Andrea Harper can be reached by phone at (603) 238-2156 or by email at [aharper@spearhospital.com](mailto:aharper@spearhospital.com).*

## Laboratory Updates

Jill Power, MS, M(ASCP), CQA(ASQ), Quality Assurance Manager, NH PHL and  
Amanda Archambault, Microbiologist, Virology and Special Testing Unit, NH PHL

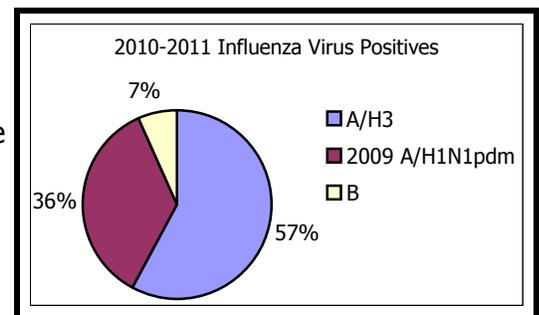
### CLIA UPDATE

To determine if laboratory services meet the conditions for recertification as set forth under 42 CFR Part 493 of the Clinical Laboratory Improvement Amendments of 1988 (CLIA), the NH PHL was inspected in November 2010. Every two years this inspection is conducted to assure the quality of the testing performed on clinical samples. A CLIA program specialist from the Boston Certification and Enforcement Branch of the Department of Health & Human Services, Centers for Medicare and Medicaid Services, evaluated the NH PHL during a three-day inspection for pre-analytical, analytical, and post-analytical testing. Personnel training and education, test procedures, method validations, quality assurance policies, proficiency testing records, and laboratory reporting are examples of items which were reviewed at the time of the inspection. The inspection revealed a few non-patient related quality system improvements that needed to be created or revised. This information will be used to improve NH PHL services. The Certificate of Compliance will be posted on the NH PHL website as soon as possible.

### INFLUENZA SEASON OVERVIEW

The NH PHL conducts year-round surveillance for flu; however, the official 2010-2011 influenza season began on October 3, 2010 and will last until the beginning of May. Most cases occur between these months, usually peaking in February, and this season has been no different. As of March 19, 2011 the NH PHL had completed influenza virus testing on 575 specimens by a molecular assay called real-time reverse transcriptase polymerase chain reaction (rRT-PCR). Of those specimens, 253 (44%) were positive for influenza, 315 (54.8%) were negative, and 6 (1.2%) were either inconclusive or invalid. Of the positives, 146 specimens were determined to be influenza A/H3, 90 were influenza 2009 A/H1N1pdm, and 17 were influenza B (Chart). Peak occurred the week of February 20, when the Virology Unit received 82 specimens and 55 (67%) were positive for flu (31 positive for A/H3, 22 positive for 2009 A/H1N1pdm, and 2 positive for B).

Chart. Types of flu positives found circulating in New Hampshire during the 2010-2011 influenza season.



In addition to flu surveillance, the Virology Unit also conducted a respiratory virus surveillance study this season. Select specimens that were negative for flu by rRT-PCR were cultured in either Rmix shell vials or Rhesus monkey kidney tubes and tested by a fluorescent antibody (FA) assay for adenovirus, flu A virus, flu B virus, parainfluenza virus 1-3, and respiratory syncytial virus. Influenza FA tests were conducted in case the viral titer of the original specimen was beyond the limit of detection of the molecular assay. The following results were obtained:

Number Positive	Virus Detected
7	Adenovirus
2	Parainfluenza 2 virus
3	Parainfluenza 3 virus
4	Respiratory syncytial virus

Although the influenza season seems to be winding down, it is important to note that it's never too late to get your flu vaccine. It has been determined that the flu virus strains used in the 2010-2011 vaccine were a good match to the strains that were actually circulating in the public; all of the specimens the NH PHL submitted to the CDC for characterization were found to have matched the strains used in the vaccine.

*(Continued on page 10)*

(Continued from page 9)

## TRAINING AND CONTINUING EDUCATION PROGRAMS

The NH PHL is happy to announce that we will be offering another course in molecular diagnostics on May 24-25, 2011. Dr. Elise Sullivan from the University of New Hampshire Department of Molecular, Cellular, and Biomedical Sciences will be guest speaking as well as various presenters from the NH PHL. Registration is limited to 16 participants and there is a registration fee payable to NACMID for continuing education credits and administrative costs (\$25 for members and \$30 for non-members). Please contact Carol Laurin at (603) 271-1383 for more information.

There will also be another wet lab training on the identification of select agents of bioterrorism on May 19, 2011 from 8:00am-5:00pm, and the next LRN meeting will be on June 29, 2011 from 9:00am-12:00pm. Please contact Maureen Collopy at (603) 271-7391 for more information.

## STAFF UPDATES



We are thrilled to have Melissa Levesque join us in the role of Laboratory Scientist I here at the NH PHL. Melissa will be working part-time, performing pulsed-field gel electrophoresis on MRSA and *C. difficile* isolates that have been sent to the NH PHL by area hospitals for a health care-associated infections study. She will be graduating from the University of New Hampshire this May with a bachelor of science degree in microbiology. Melissa has come to the lab to gain professional experience while obtaining her masters degree in public health. When Melissa isn't studying or working, she likes to spend her time snowboarding or with her two cats Ryanne and Maxine.

## CLINICAL MICROBIOLOGY SURVEILLANCE UPDATE

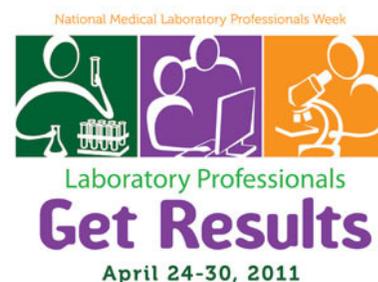
Please send us your isolates for epidemiological surveillance and antibiotic resistance testing. The NH PHL Clinical Microbiology Unit would like to obtain isolates and/or specimens for communicable diseases from every hospital and facility in NH in order to identify trends for epidemiological purposes. However, submitting an isolate does not supplant your facility's responsibility to notify the State of a reportable pathogen. It is still necessary to send the appropriate documentation to the New Hampshire Bureau of Communicable Disease Control. If you do not have the most current isolate submission list, please visit <http://www.dhhs.nh.gov/dphs/lab/publications.htm>.

## LABORATORY SYSTEM IMPROVEMENT PROGRAM UPDATE (LSIP)

The NH PHL field tested a public health laboratory system assessment in March 2007, based on the Ten Essential Public Health Services and the Core Functions and Capabilities of Public Health Laboratories. The process and an instrument tool were evaluated with over 100 stakeholders measuring performance with our partners in the state public health laboratory system. Quality improvement efforts were identified from the results of the scoring. On May 4, 2011, the NH PHL will be the first beta test for a new and improved instrument tool by holding an assessment once again. Stakeholders within the system will be invited to attend the one-day LSIP meeting. This re-assessment will be the first of all 50 state public health laboratory systems.

## LABORATORY PROFESSIONALS WEEK

Don't forget to celebrate all the hard work you do all year long with Laboratory Professionals Week on April 24-30, 2011!



## Sudoku

Susanne Desrosiers, Microbiologist, Virology and Special Testing Unit, NH PHL

Confirming outbreaks have become such a large part of our work that they have now "broken out" of the lab and into a Sudoku puzzle!

Try your luck at diagnosing this one!

Complete the grid so that each row, column, and 3X3 box contains every letter of the word OUTBREAKS. No letter must be repeated in any one row, column, or box.

		A					K	U
			A		R	B		
E			T	B				
B	A				O			
				E				
			K				B	O
				R	T			S
		T	U		K			
R	O					T		



*A couple of NH PHL scientists hard at work during an event.*

*For those seeking puzzling solutions, here are the answers to the logic problem that was presented in the Fall 2010 newsletter. We hope you were up to the challenge! Sue/Microbiologist II/Singer/Schedule/Thursday, Carol/Microbiologist III/Kayaker/Respiratory Study/Friday, Kristin/Lab Scientist III/Pet Lover/Float/Tuesday, Alma/Lab Scientist II/Photographer/SDA/Monday, and Heather/Lab Helper/Wedding/Maintenance/Wednesday.*



**Contact  
us!!**



New Hampshire Department of Health and Human Services  
Division of Public Health Services  
Bureau of Laboratory Services  
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*Special thanks to the contributors to the newsletter—not only do they have their everyday tasks to tend to, but they graciously agreed to write an article (or two or three or maybe a recurring article) for us!*

*The NH PHL Newsletter Committee:  
Rebecca Adams, Amanda Archambault, Susanne Desrosiers, Jill Power, Peggy Sweeney, and Sandie White*